

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/05806

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 39/21, 39/38; C07K 1/00  
US CL : 424/184.1, 187.1, 188.1; 530/350, 403, 826

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
U.S. : 424/184.1, 187.1, 188.1; 530/350, 403, 826

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
WEST, Medline

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ---	US 6,132,721 A (ZAGURY et al.) 17 October 2000 (17.10.00), see entire reference.	1-5
Y		6-12
X ---	MA et al. Molecular determinants for cellular uptake of Tat protein of human immunodeficiency virus type 1 in brain cells. J. Virol. March 1997, Vol. 71, No. 3, pp 2495-2499, see entire reference.	1-3
Y		4-12

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

15 September 2004 (15.09.2004)

Date of mailing of the international search report

06 OCT 2004

Name and mailing address of the ISA/US

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## Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claim Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claim Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claim Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:  
Please See Continuation Sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1-12

Remark on Protest

☐  
☐

The additional search fees were accompanied by the applicant's protest.  
No protest accompanied the payment of additional search fees.

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## BOX II. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claims 1-12, drawn to a therapeutic agent comprising Tat protein.

Group II, claims 13-21, drawn to a method to induce humoral and cellular responses.

Group III, claims 22-26, drawn to process for producing Tat protein.

Group IV, claim 27, drawn to a second process for producing Tat protein.

Group V, claim 28, drawn to Tat.

Group VI, claim 29, drawn to the "use" of Tat.

Group VII, claims 30-32, drawn to a method of treating HIV infection.

Group VIII, claims 33-42, drawn to Tat-absorbed nanoparticle.

Group IX, claims 43-48, drawn to a process for producing Tat-absorbed nanoparticle.

The inventions listed as Groups I-IX do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The inventions listed as Groups I-IX do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The common technical feature of the claimed invention is a therapeutic Tat protein which is not an advancement over the state of the art. Therapeutic compositions comprising Tat protein are known in the art as exemplified by Zagury et al., US Patent 6,132,721. Therefore, the claims cannot be said to have unity of invention.